

According to the present invention, a virtual network communication system is provided for effecting secure communications between user agents at different sites within said virtual network, comprising at least one Private Tuple Space within each of the sites for effecting intra-site communications between the agents, a Shared Tuple Space for effecting inter-site communications between different sites, and a Coordinator Manager within each of the sites for receiving user initiated communication requests from the Private Tuple Space to communicate between user agents at the different sites, authenticating the requests and in response dynamically creating and managing instances of Coordinators at each of the different sites which embed messages from the user agents in secure tuples using multi-layered encryption and exchange the secure tuples over the Shared Tuple Space.